

# AMERICAN VETERINARY REVIEW,

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## EDITORIAL.

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TO OUR READERS.—The present number closes the fourteenth volume of the AMERICAN VETERINARY REVIEW, and we feel that the occasion is a becoming one for the tender to our friends and correspondents of our sincere acknowledgments for the countenance and assistance which we have received at their hands. The kind appreciation of our readers and the valuable support of our subscribers and contributors have not unfrequently caused a recurrence of the thought that the termination of our work is an inadmissible idea, and have likewise brought us to the consideration of the query whether we could not improve upon past performances by rendering to our supporters a better return in the future for the favorable consideration we have hitherto enjoyed. Our correspondents may justly claim a large share in any claim which may exist for the credit of our success, and to those whose articles and reported cases have furnished the pages of the volume now completed, and to the veterinary societies which have so kindly accepted our offer to make the REVIEW their organ of communication with the profession, as well as to the veterinary colleges which by their recognition and acceptance have

proved that they have not looked upon us as the organ of a special school, or any exclusive society or particular *clique*, but as the one impartial representative of veterinary science throughout the country; to all these, we tender our thanks, with our hope that they will continue their assistance and their patronage.

As has been largely the case of late and as it continues to be now, we have been embarrassed by lack of space, and at times papers of special interest as well as other matter of general value have been subjected to postponement at quite inconvenient times; but it gives us pleasure to inform our subscribers that this difficulty will now be remedied, and that with our April issue, which will be the initial number of our fifteenth volume, we shall increase the number of our pages, and otherwise so arrange some of our reading matter, that we shall be able to obviate any further trouble from this limitation of our space, as well as to correct certain other defects which we have recently encountered, as well as to improve some of the aspects present in some of our late issues and especially the present one. We are pleased to be able to state further, that while all our intended changes will necessarily involve an increase of expenses, the rate of subscription will remain the same, and all that we ask from our friends in relation to this point, is that they may avoid the habit of dilatory settlement in remitting their subscriptions, into which some of them have fallen. The neglect of this hint may seriously interfere with the execution of the changes we have in contemplation and—but *verb. sap.*

NOTICE—Subscribers to the AMERICAN VETERINARY REVIEW are informed that Sabiston & Murray, of 916 6th Avenue, New York, are manufacturing and will have ready immediately a binder to hold the REVIEW for one year. It will consist of a case neatly made of cloth, with the title AMERICAN VETERINARY REVIEW stamped in gold on the back, and the numbers will be kept together by means of twelve cords inside, one for each number of the REVIEW. They will send the binder to any subscriber desiring it, by mail postpaid for sixty cents.

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ORIGINAL ARTICLES.

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## OPERATION FOR CYSTIC CALCULI.

BY PROF. M. STALKER, V.S., Ames, Iowa.

(A Paper read before the Iowa State Veterinary Medical Association).

I do not present this paper with the thought of contributing something new to veterinary literature. I do not claim the credit of a discovery in anything I have to say. My work, however, has given me the opportunity for practical experience with a certain class of cases that may not have fallen in the line of experience with all of you. No matter how thoroughly grounded one may be in the theory of any disease or operation, experience will throw some additional light on the subject. The simplest operation performed for the first time has its attending anxiety for the surgeon. If I can say a word that will aid one of you in performing an operation with less risk to the patient and less solicitude on your part, I have accomplished what will satisfy me.

In the discussion of this question we wish first to arrive at some rational method of examination that will insure a correct diagnosis. There is probably no difficulty that is susceptible of clearer proof than the presence of a cystic calculus, and yet I apprehend that a large number of cases go unrecognized. A physical examination is perfectly simple and easy to perform, and its results need leave no doubt in the mind of the intelligent examiner as to the presence of a calculus. The trouble is not in making the examination. The danger is in making one of the "didn't-know-it-was-loaded," mistakes.

Three cases of cystic calculi have come under my observation at the college hospital, two of them within the last twelve months. All these cases had been treated repeatedly for colic. They were all looked upon by their owners as being strongly predisposed to that trouble. The history of all these cases showed that they were subject to these painful attacks under the most varying conditions. No system of

feeding, working or general management afforded any immunity against these troublesome attacks. Such a history, taken with the accompanying symptom of frequent efforts at micturation, but the passage of only a small quantity of urine at any one time, it would seem should have suggested to some one the thought of other trouble than colic in any of its forms. But it is quite as certain that it did not. The first case was an aged gelding that had been raised and worked on a farm about four miles from the college. He had been subject to these attacks for two or three years. He was a strong, good-looking work animal, and apparently suffered no special inconvenience except during the periodic attacks. The history of the case directed my attention to the probability of calculus. Rectal examination revealed a calculus about the size of an ordinary hen's egg. I informed the owner that an operation was the only course that promised any satisfactory results.

After putting the animal in proper condition for the operation, I passed the catheter and secured it in position by passing a strap around the body. The patient was then secured in a narrow operating stall so he could not get down. I then proceeded to operate by making a free incision down upon the catheter, just over, or slightly above the ischial arch. This done the catheter was pushed downward, leaving a free opening into the urethra. By introducing the finger the calculus could be plainly felt, tightly wedged in the neck of the bladder. I had but to seize the stone between the thumb and finger and by making considerable traction I took it away without further trouble. The urine followed through the open wound with great force, going to a distance of ten feet. I was somewhat chagrined at the ease with which the operation was performed. I had a beautiful new lithotrite, with which I was expecting to make a very pleasing impression on the minds of the observers, but there was no occasion whatever for its use. The wound was closed with wire sutures and dressed antiseptically. But very little inflammation followed. The only complication presented was the tendency for the urine to escape through the wound and retard healing. After one or two days I kept the catheter constantly in place,



removing it two or three times each day and returning it after thoroughly cleansing. The wound healed kindly and the animal was discharged from the hospital at the end of two weeks. There were no indications of further trouble so long as I knew the animal, which was for a period of two or three years. In this case no anæsthetic was used.

The second case was a mare of mature age; a fine strong farm animal. She had been subject to colicky pains for more than a year. There was occasional difficulty in passing the urine. At such times the discharge would be slight and attended with pain. The history of the case suggested examination for calculus. Exploration per vaginum revealed the presence of a large calculus, very rough on its exterior and spheroidal in shape. The animal was conditioned by light rations of laxative food for two days previous to the operation. The patient was placed upon the operating table and chloroform administered. So soon as complete anæsthesia had set in a thorough examination was made. The stone proved to be much too large to be extracted through the meatus. All my efforts at breaking down the concretion proved unsuccessful. It was so large that I could not succeed in securing it between the jaws of the lithotrite in such a way as to crush it. I finally determined to enlarge the passage. I carried a probe-pointed bistoury into the vagina with the left hand. With the right I pushed the instrument into the meatus and made a careful cut upward and slightly to one side of the median line. With the muscular fibres thus severed, it was an easy matter to secure such a hold as would enable me to extract the object. The bladder was thoroughly cleansed and washed with antiseptics. Two or three catgut sutures were placed, and the animal removed from the table as soon as consciousness had returned. The patient did excellently well and was sent home in ten days.

The third case was a favorite family mare, twenty-two years old. She had been troubled with periodic attacks of colic-like pains for some years. She was brought to the college hospital a few weeks ago for treatment. After getting the history of the case, I directed one of my students to make

an examination per vaginum. He at once informed me there was a tumor or some other form of abnormal growth. After questioning him as to situation and general characteristics, proceeded to make an examination myself. A very large calculus was present. The method of operating was the same as in the last described case, with the exception of allowing the wound to unite without the aid of sutures. The patient did well and was discharged at the end of fifteen days. The stone removed in this last instance weighed fifteen ounces.

These are the only cases that have come under my observation since I have had charge of the hospital at the veterinary college. Any one of these might have escaped a proper diagnosis if nothing more than casual thought had been given to the case. I cannot urge upon you too strongly the necessity for careful attention in all cases of supposed predisposition to colic of a spasmodic type. Do not depend on the owner giving such a history as might lead you to almost a certain knowledge that some other form of trouble existed. These evidences may have escaped the notice of the owner or attendant, or in any event he may fail to give an account of them in his history of the case. You have a patient before you. It is your duty to determine what he is suffering from. The disease diagnosed, there is but one method of procedure.

#### DISCUSSION.

Dr. Thomas: "We are all surely very much interested in the lucid description given of these operations and will be interested to examine these concretions. I would like to know if it would be advisable to examine and operate on a mare heavy with foal. Would examination or operation not produce abortion?"

Prof. Stalker: "I do not think any harm would come from making a physical examination sufficient to make a diagnosis, but would not advise an operation until after the foal was dropped."

Dr. Morse: "I know a case which aborted from the irritation of a manual examination per vaginum. I would like to know if such results generally follow."

Dr. Stewart: "I do not think such results will often follow if usual care is taken. Would not the presence of a large calculus seriously interfere with the act of parturition?"

Dr. Stalker: "The interference would not be very great, owing to the pendulous condition of the bladder. Abortion would probably result from the removal of the calculus."

Dr. Inger: "I have seen cases of stone in the bladder, which did not show

symptoms of colic; but there was some irritation of the bladder. I removed this calculus (exhibiting a large stone) from a mare in September and she dropped a living foal the next March. The incontinence in this case had subsided at the end of the third week. The operation on the gelding for the removal of this stone was similar to the one described in the paper. I did not suture the external wound, which healed very nicely in a short time. These animals were anaesthetised."

Prof. Stalker: "I would advise the use of anaesthetics in the mare when the stone is large, but think it better to operate on the gelding in the standing position. The operation is not a painful one, at least the horse I operated on did not kick nor make much objection, yet precaution should be taken to make it impossible for the operator to be injured."

Dr. Stewart: "I would like to ask Dr. Ingar to describe his method of operating in the mare."

Dr. Ingar: "I gradually dilated the urethra with my hand, taking thirty or forty minutes to dilate the sphincter sufficiently to allow my hand to pass. The stone was grasped with thumb and fingers and removed with the hand."

Dr. Brown saw a calculus removed from a gelding, in which case the stone was grasped by a pair of human obstetric forceps, and he would suggest their use in a mare.

Dr. Stewart thought the suggestion a good one. The peculiar manner of locking the blades would admit of their easy introduction into the bladder, and the shape of the blades would facilitate dilatation of the vesical sphincter by steady traction, which would be much easier upon the operator and quite safe to the animal; care being taken to select suitably shaped forceps.

Dr. Johnson: "Would not a collodion dressing over the sutured wound in the male secure primary adhesions?"

Prof. Stalker: "The urine will find its way around the catheter into the wound and prevent the union of the parts. The results are very satisfactory without the use of sutures."

## RHEUMATISM.

By E. DIGGS, V.S.

(A Paper read before the Indiana Veterinary Association).

Rheumatism is a subject of great importance, one which will admit of broad discussion, is very common, baffles the wisest of men, and one which should be investigated and re-investigated until, if possible, the causes are better known, and the treatment improved.

Therefore, I bring this paper before you, not for the purpose of telling you all about rheumatism, but to tell you what little I know about it from observation and experience, and what prominent writers say about it, (principally the latter).

I have seen no new works or ideas on the disease, either in books or in our veterinary journals.

Rheumatism is an acute febrile disease, caused by certain obscure climatic and diathetic influences, and characterized by pyrexia, sweats and acute shifting inflammation of the joints and other structures.

Of the predisposing causes of acute rheumatism, the most important is inheritance, which can be traced in 27 per cent. of all cases. Previous attacks increase the liability of a return of the disease, but there is a limit to predisposition from this cause after several recurrences.

Climate seems to be a great factor in the production of rheumatism. It is at present a very common result of catarrhal fever, and also as a complication. One of the most common causes is exposure to cold and wet, or in other words the disease seems to have an immediate etiological relation to weather, season and climate. It may make its appearance after a sprain or injury to a joint.

The post-mortem appearances in acute rheumatism are—on opening an affected joint, we find moderate hyperæmia—with occasional ecchymosis of the synovial membrane and fibrous tissues connected with the articulation, a somewhat opaque, granular, swollen appearance of the synovial surface, and a considerable amount of inflammatory effusion, generally thin, clear, alkaline and albuminous.

The cartilages are sometimes inflamed, the tendons and their sheaths are frequently congested at the seat of the effusion. When death is produced by rheumatism, there must be some complicating intercurrent disease or injury, and in such cases the non-arthritical lesions are necessarily the most important, such as the lungs, pleura, heart, pericardium, etc.

When pyrexia has been great, the solid viscera present a granular degeneration, and are prone to rapid decomposition, and in cases of hyperpyrexia the blood is fluid.

From chemical analysis of the blood, the liquor sanguinis is found to be alkaline; the fibrin has been said to increase in amount about one per cent, the amount of urea is not above normal, and neither uric nor lactic acid, nor any other abnor-

mal principle has been found in the blood during an attack of acute rheumatism.

The pathology of acute rheumatism is still obscure, (of course a germ is an easy answer) and in the present article it will be sufficient to enumerate the principal theories upon the subject.

1.—Prout, Todd and Richardson say: Lactic acid accumulates in the body, and the symptoms are directly referable to the action of this poison upon the system.

2.—Canstall and Seitz say: Chill of the peripheral parts of the body, especially of the skin and joints, causes disturbance of the corresponding parts of the central nervous system, and this gives rise to pain and vaso-motor or trophic changes of the same peripheral parts, and to fever.

3.—Senator says: Chill causes accumulation of lactic acid; this acts on the central nervous system, and the disordered nervous centers react upon the joints, etc.

4.—Fuller says: Chill disturbs the nervous system; this disturbs nutrition generally; lactic or some other acid is retained and acts as a poison.

5.—Hueter says: Chills are attended with the entrance of micrococci into the system and endocarditis is the result; the joints symptoms are secondary and embolic, as in pyæmic arthritis.

6.—Sailsbury says: The disease is due to the presence in the blood of a vegetable organism of a definite character (*Zymotosis translucens*).

7.—MacLagan says: Rheumatism is due to the presence in the system of a poison which is of the nature of a miasm; entering from without, this miasm is generically *allied to*, but specifically distinct from the miasm of malarial fever.

Without attempting to criticise all these theories, we may conclude that the true pathology of rheumatism cannot possibly be settled until the essential nature of fever is thoroughly understood, which cannot be until the physiologists explain why the temperature in health remains at a given point.

My opinion is, that an acid of some kind is formed or re-



tained in the system from some cause, and I do not believe this to be a micro-organism. So on account of so much darkness as to the real pathology and origin of this disease, we will have to wait and hope that at some time in the near future, some one will make this grand discovery, which, no doubt, will assist us in its treatment.

Of course, there are various forms and classes of rheumatism which it will be unnecessary to describe in full, therefore I will simply name them, as follows: Acute, sub-acute, chronic, gonorrheal muscular, muscullar torticollis, pleurodynia, lumbago, cephalodynia, dorsodynia, abdominal, etc.

Some of these forms are uncommon in the horse, or if they occur I am unable to diagnose them. I will next direct your attention to a few of the most important cases I have had to deal with.

1.—A two-year-old colt with muscular rheumatism caused by exposure to cold and wet; found him lying on his side perfectly stiff, muscles rigid, the division of which could be easily seen; pressure to any part of the body caused great pain; pulse quickened; temperature, 103°F.

Gave nitrate of potash three times a day and ordered him turned with care twice a day for two days. I also left valerianate of morphine to be given as necessary, and followed this treatment with salicylate of soda.

On the fourth day he was on his feet and recovered very rapidly.

2.—A colt two weeks old, with articular rheumatism of the near hock joint caused by an umbilical abscess.

The affected articulation was very painful and considerably swollen; the pulse quickened and temperature elevated.

I gave bromide of potash and tr. strophanthus as necessary; anodyne liniment externally, and followed with salicylate of ammonia. The foal recovered in about two weeks.

3.—A horse eight years old, with abdominal rheumatism caused by influenza. There was tucking up of the flanks, cough, tenderness of abdominal muscles; the patient walked with great difficulty, being almost unable to step over anything; pulse quickened, temperature 102½°F.

Gave bromide of potash and syrup of wild cherry, followed by salicylate of soda. Recovery followed in three weeks.

4.—A mare six years old with articular rheumatism of the near knee and hock joints caused by influenza. She walked with great difficulty, joints swollen and very tender; pulse quickened and temperature elevated.

Gave bromide of potash and valerianate of morphine, followed by salicylate of soda, and that by nux vomica combined with hyposulphite of soda, with gentle exercise. She is gradually improving, but not well.

I communicate these cases to you simply to show you my line of treatment for rheumatism, with which I have had most excellent results.

#### DISCUSSION.

Dr. Thompson inquired of essayist how he distinguished between acute rheumatism and osteo porosis? The questioner said he had had many cases where he had found it impossible to distinguish between the two, excepting by examination of the urine. If this was acid it was rheumatism; if alkaline, osteo-porosis.

Dr. Culbert inquired, had the essayist noticed any cracking of the joints? No. Did he not think hot water very beneficial in cases where joint was affected? Yes, and essayist often used in cases of severe pain in a joint, a liniment of aconite, belladonna and camphor with oil.

Dr. Feeling believed in the beneficial effect of hot water, as he could speak from experience, being a martyr to rheumatism.

Dr. Macaulay in his treatment always gave a brisk cathartic and followed up generally with nitrate of potash and salicylate of soda. Had had two cases of osteo-porosis during the year, but had no difficulty in diagnosing; believed that in rheumatic cases the pain and lameness came on suddenly, while in osteo-porosis the lameness was gradual and constantly increasing and not so inclined to shift.

Dr. Roberts does not believe in large doses of salicylate of soda, but prefers to give half drachm doses often, and in combination gives diuretics and aconite.

Dr. Thompson had never seen a case that occurred where a horse stood on a board floor, and believed the damp earth was frequently the cause of the trouble.

Dr. Rodgers never gave aloes in rheumatism, but preferred sulphate of magnesia, followed by nitrate of potash and colchicum.

Dr. Shaffer believed in good hygienic surroundings while treating.

## COLD APPLICATIONS VERSUS COUNTER-IRRITATION IN PNEUMONIA.

By N. R. MACAULAY, V.S.

(A Paper read before the Indiana Veterinary Association).

I am privileged to present for your consideration and criticism a few remarks on the actions of counter-irritants and cold applications in pneumonia. In bringing this subject before you I feel that there is no apology needed on my part, as the disease is one with which we are all familiar, being met with in practice as frequently, perhaps, as any, and the application also of counter-irritants in this trouble is one to which I think none of us are strangers, while with cold applications we are not so familiar, very few of us probably knowing much about them, practically, in pneumonia. I have never used them myself, but my attention has, in numerous instances, been drawn to the effects of counter-irritation in cases of pneumonia, that were very far from being beneficial, and it was these observations that led me to study more closely the disease and remedy, and that really led to the writing of this paper.

To compare satisfactorily the effects of these two agents, so entirely opposite in their actions on pneumonia, let us forget, if we can, that we have ever seen a case where the counter-irritant has been applied and, if possible, for the time, let us drown any prejudice we may have formed in our minds against the use of cold applications, and try and settle by reasoning which should be the proper mode of treatment. To do this, and be sure we are correct in our conclusions, it is first necessary that we thoroughly understand the pathology of the trouble we are dealing with, and secondly, the physiological action of the remedies we apply.

Pneumonia or lung fever, as it is very commonly termed, is generally ushered in with a "chill," or "chills." In almost all, or I might say in all of our cases of pneumonia we can find some direct cause for this "chilling." The horse may have been out in some cold rain; or—as is frequently the case

—has been carefully blanketed when in the stable, and his overcoat, as it may be termed, is removed when he is taken out in the colder air; or the patient may have been in some draught, etc. The causes are numerous, each case having its own special ætiology, and it matters not what this may be so the "chill" occurs.

The question now arises: What is the nature of the "chilling"? It is of nervous origin, and this brings us down to the starting-point of the disease. This "chill" has been defined as a "prolonged depression of nerve force without the reaction which should occur immediately after the collapse."

In the case where the "chill" occurs in the horse, the action of the cold air on the cutaneous nerves and nerve endings has been severe, so severe that for a time the nerve centres are paralyzed, as it were, from the number of afferent impulses received, and have lost control over the vaso-motor center, so that we find the caliber of the vessels over which these minute nerves possess an inhibitory power, constricted and carrying less blood than formerly. This condition of affairs is followed in a short time by what is termed the "reaction," when the nerve centers, recovering from the shock, begin to reassert command over the vaso-constrictor centre, and the blood flows again freely through the minute capillaries; and it is just at this point where the crisis occurs. If the action of the cold has not been too depressing in its effect, the minute nerves once more take command of the capillaries and vessels nearest them, and all goes on well. If, on the other hand, the depressing effects have been too severe, these nerves are not able to reassume their governing power over the walls of the vessels, these consequently lose their tone, so that when the blood is pumped into them they become unduly relaxed and filled, and because of this the blood flows slowly and more slowly until it almost stagnates and we have what is termed congestion.

This is the result of the action of the cold air on the outside skin. Now, as we are dealing more particularly with the lungs, let us not forget that the mucous membrane lining the bronchial tubes and the air cells is continuous with the exter-

nal skin, and in structure much the same, only much more delicate and much more sensitive ; and as the same cold air is breathed into the lungs that causes such an action on the skin, we would expect to find the result of its action here much more serious ; and that is exactly what we do find.

When the lungs become congested, their function is greatly interfered with, and it is about this time that the "chilling" or shivering is noticed. This has been attributed to nature as a last resource, trying mechanically to rouse the nerve centres, and when these have been too greatly strained to respond, the most serious consequences occur and inflammation shortly settles on the congested lung and we have pneumonia. With the occurrence of this congestion and inflammation we notice other changes from the normal condition, notably, increased number of respirations, increased heart beat, rise in temperature, dryness of skin, impaired assimilation, etc.

Why do we find the number of respirations and the number of heart beats increased ? It is greatly due to the failure of the vagi to assert their inhibitory power over the lungs and heart, and the quicker heart beat is partially due to lack of resistance of blood pressure, but if we look closely and study what is the result of the increased respiration and pulsation on the system, we will surely see that here again nature, with that inherent power she possesses of rectifying evils that may happen to the system, is trying to remedy the existing condition. In the quickened pulsation of the heart I fancy I see an attempt to drive the blood through the vessels in which it is stagnating, and thus equalize the circulation, and in the increased respiration is it not nature, by the contraction and expansion of the lung, assisting the heart in its action by mechanically forcing the blood along through the congested vessels, as well as at the same time causing the healthy or normal part of the lung to do more oxidation of the blood ? It is the *vis medicatrix naturæ* working through the vagi if you will, but if we recognize the beneficial effects of this increased respiration and pulsation, let us be careful that in our treatment we in no wise go counter to nature's dictations.



The increase of temperature that we notice in the patient has been set down to increased metabolism, while other and later writers believe there is a thermic center in the corpus striatum, and that this has been so influenced by adverse surroundings that it has lost its inhibitory power over the system. But whatever may be the correct cause of the rise in temperature, we will pass it by for the present by merely noting that it is there, and is symbolical by its rise or fall of the intensity of the internal trouble.

The dryness of the skin is due to the increase of temperature and the loss of the nerve control over the sudoriferous glands.

These are some of the most striking changes we notice in pneumonia, with some of the physiological reasons for their existence.

The physical symptoms of pneumonia we are all familiar with; on percussion we have a dullness that invariably affects the lower part of the lung and extends upwards, the distance being only governed by the extent of the disease. Over this dull spot there is also a loss of respiratory murmur. The question may here present itself as to why the lower part of the lung should be the first part affected? The answer is simply the law of gravitation. I mention this here because I think it shows us that some of the laws that affect diseased parts are the same as those which govern the universe, and in our treatment of this disease certain laws, although they may appear to be purely mechanical, exert the same influence on the system as they do in nature and should not be overlooked. Farther on I may have reason to refer to this again.

In following up a case of pneumonia we find that it usually extends over from two to three weeks, and that this period is divided into certain well defined stages. The first or initial stage occurs with the rigors or shiverings. In this stage there is high temperature and considerable congestion of the lungs, which is not pronounced enough, however, to be apparent on percussion. If this shivering has its desired effect of rousing the system, the congestions are dispelled and the trouble is at an end, and it is only when this is not the case

that we have the second stage, appearing about the second or third day. When this stage occurs, percussion and auscultation give definite results, and we are able to say how much of the lung is affected. In this stage the temperature generally ranges from  $103^{\circ}$  to  $106^{\circ}$ , and remains about the same until from the seventh to tenth day when, if the animal is to recover it gradually falls, the appetite improves and congested condition of lung gradually disappears. If the case is to terminate seriously we find no diminution of temperature and an increase in size of part over the lung where there is no resonance or percussion, and this is shortly followed by death.

Remembering the conditions of the lung in pneumonia, with all the incidental changes accompanying the inflammation, let us look upon the action of a smart counter-irritant, say a mustard blister, as that is perhaps most frequently applied, and see in what way it will help toward recovery.

When first a blister is applied to the skin there is a pleasurable sensation of warmth, which is quickly followed by a tingling, burning and then intense pain. We can some of us speak very feelingly on this point, knowing from personal experience how a blister acts.

When a blister is applied to the skin its first action on the nerves causes a momentary constriction of the blood vessels, followed quickly, however, by an enlargement of the vessels by distention of their caliber and a consequent congestion with blood.

Up to this point, in comparing the actions of the blister and the cold on the system, are they not almost identical? The main difference in the results appears to be that one—the cold—has been more general and the other merely local in its effects. The stimulus to the nerves has been as different almost, as it is possible for them to be, but in each case their action on the nervous system must have been alike as far as the vaso-motor centre is concerned, because we find the same chain of phenomena following each of the irritants.

Another point, however, in the action of the blister on the nervous system has yet to be considered, and that is the sensation of pain it causes. What effect has this on the internal

trouble? We know that before this sensation of pain occurs the nerves must have been injured. Certain experiments on animals by Wood and others have proven that injuries to the nervous system cause a rise in temperature, and Dr. White, lecturer at Guy's Hospital, London, in an able paper, has tried to prove that all pyrexias are of a nervous origin, and in following up the history of a case of pneumonia we can thoroughly substantiate that fact. The action of the blister then, because of its irritating effect on the nerves, cannot but increase the temperature and by so doing aggravate the disease.

True, we find the capillaries and veins and, in fact, all the cutaneous circulation around the irritated part in a congested condition, and in this way an external congestion is established and a "reservoir" formed where a large quantity of blood can be stored away, thus drawing a great deal from the internal organs, and by so doing the advocate of counter-irritation reasons we will relieve the congested condition of the vessels in the inflamed lungs; but before jumping at this conclusion, let us look a little further into its action. When the pain due to the blister first commences, it causes great uneasiness of the animal, as is shown by pawing, perspiring and uneasy movements generally, which in a short time gives place to a pain that is more settled, that is, it is not so severe when standing quietly, but that is intense when any movement is made.

The patient if made to move, does so very reluctantly and frequently groans with the pain so caused, and in order to move this blistered area as little as possible, we find the animal stationary, with breathing faster and more shallow, the upper portion of the lung doing the greatest amount of work. At every inspiration there is a stretching of the muscles over which the blister is, and the sufferer finds that by standing quietly, and using these muscles as little as possible, he endures less pain; thus we find the upper portion of the lungs called upon to do more, while the lower, the inflamed portion, and the parts immediately adjacent to the diseased area, do less than formerly, so that the blood stasis is much more

readily effected than when that portion of the lung was doing a little expansion and contraction, for then these very movements helped to force the stagnating blood along. Just here allow me to make a remark about counter-irritants in general. In all cases they enforce rest of the part over which they are applied, and I believe that many a case of sprain or strain has been greatly benefited by this enforced rest the animal has given the limb because of the pain the blister has caused, but while this enforced rest is beneficial in those cases it certainly is detrimental in those where the lungs are involved, for here there are certain functions that must be performed whether the animal is well or ill, sleeping or waking, and anything that tends to stop such function, aims directly at the life of the animal.

Such being some of the chief actions of the blister, wherein does it do anything towards assisting the animal to recovery? True, a great many cases recover that have been severely blistered, but did the blistering effect the cure? I think not. The animal that has recovered was one that had sufficient vitality to fight through the internal or disease "fire" if I may so term it, and the external fire due to the application, and has recovered in spite of the blistering.

Before going farther it might be serviceable to look back on the treatment of pneumonia in years gone by and compare it with the treatment of to-day in the human family, and see if we can deduce any lessons therefrom for ourselves.

A synopsis of former treatment, without going into internal medicaments, as that is apart from my subject, is summed up in a few words. The patient was kept in a close, warm room, was warmly blanketed, often blistered. And why all this heat? From a fear the patient would chill; and in connection with this treatment and in exactly the same line, the sufferer was allowed nothing but warmed drinks, although he might beg and crave and eventually die for the want of cold water.

In the treatment of to-day what changes are noticeable? Excessive blanketing is discarded, and as far as possible the room is kept sweet and pure and of an even temperature, not

too warm, and patient is allowed all the cold water he wishes. In our treatment of horses do we not follow out the same rules as far as possible? Formerly with us the water was warmed slightly before being given, but now it is as cold as the water healthy horses drink. You may ask how did these changes in hygienic surroundings and in the warm and cold water drinks come about? Some clever physician, I wish I knew his name, studying nature's demands in such a case as shown by the patient's desires, decided to follow no longer in the steps of his predecessors, but to do as nature dictated, and a trial of such treatment completely revolutionized former methods. Now in the matter of the drinking of warm or cold water drinks with fevered patients, wherein lies the difference. Why is it that the patient suffering from pyrexia craves cold water and does not care for the heated water? In both cases the elements in the water are much the same, if anything the heated water is the purer, yet the whole system seems by its craving for the cold to say there is too much heat there already, and the cold by counteracting to a certain extent this excessive heat is particularly agreeable to the sufferer and considerable amounts of it are taken with benefit when the warm would be refused.

This action on the temperature being the chief, or I might say the only difference in the action of the cold and heated water, we are driven to the conclusion that it is purely mechanical, reducing the animal heat in pretty much the same manner as a cup of cold water cools a basin of warm into which it has been poured.

The remarks on the action of cold water internally I have intended as introductory or leading up to a few thoughts on the action of cold water externally. When we consider the great benefit derived by pneumonia patients from the action of the cold water internally, and when we also remember that this beneficial action is for the most part mechanical in its drawing of heat from the system, does it not forcibly suggest the use of cold water externally? To my mind it certainly does and especially in those cases where the temperature is, say  $105^{\circ}$  and upwards, for here the danger to the patient is



imminent if it should remain long at that height, but to substantiate this we must prove it to be correct by reasoning. Let us picture before us the horse with pneumonia and a high temperature: on putting our hand to his body we find the surface hot and dry; let a blanket be wrung out of cold water and applied to the body, more particularly I would say over the chest, and over this put a dry blanket. To many this will seem very unorthodox treatment, but let us see what the action of this cold will be. Its first action will be on the terminal nerves, and we know that when the action of cold is not prolonged long enough to do evil it always does good. The nerves are aroused into action as formerly, the first of which is constriction of blood vessels, but when the reaction comes they still have control because the shock has not been too severe and we have them dilated and filled with blood, but not to engorgement. Thus we see that the action of the cold application is two-fold. There is the mechanical action by drawing off the heat from the system to warm the blanket, and as the blanket warms we find the capillaries filling with blood, giving us the great action of the counter-irritant without the intense pain. I do not think there is any possible chance of the cold blanket "chilling" the animal if the wet blanket is properly covered with the dry, because the bulk of the patient's body is too great and the heat given off is too much in comparison with the cold held by the water in the folds of the blanket. As the blanket would heat take it off and apply another as quickly as possible, and we would again have the same changes—the thermometer being the guide which would direct when to stop.

Let us study for a moment and see what must be the action of this drawing of heat from the overheated system. It is bound to lower the temperature. In all inflammation we find certain phenomena existing. Heat, pain, redness and swelling, each of these depends on the others for its own existence, and this being the fact it should be manifestly plain to all of us that if any of these essential qualifications be done away with or reduced, the inflamed state itself must either cease to be or must be greatly modified.

In this paper I do not intend to consider the action of antipyretics internally, such as quinine, antipyrin, antifebrin or salicylate of soda, further than to say that they by lowering the temperature are of the greatest benefit in fevered patients, and I believe would act harmoniously with the external application. In Germany particularly do we now find patients suffering from typhoid fever and pyrexias of all descriptions being treated with the "cold pack," as it is termed, and with manifest success. By actual experiment Dr. Sassatsky of St. Petersburg found cold water treatment far more antipyretic than either quinine or salicylate of soda. They all diminished the elimination of nitrogen by all the excretory channels, but the cold water most of any.

In cases of sunstroke, those of us who have met with such cases know the great benefit derived from cold water. By this means I have reduced the temperature of a horse from  $108\frac{2}{5}^{\circ}$  F. to  $101^{\circ}$  in five hours. True, some one may raise the objection that the causes for rise of temperature in this case are entirely different from what has raised the temperature in pneumonia, but, as before mentioned, the result is the same, and knowing as we do the quickness with which a high fever wears out the animal's system, let us forget the cause and get rid of the existing condition.

In speaking of pneumonia and its causes I have not made mention of the bacilli pneumococci said to be found in lung troubles. My not having mentioned this before is not due to any unbelief of mine of their existence; I certainly think they are to be found in many instances, particularly I would say where the pneumonia is a sequence of some disease, such as influenza. At the present day great investigations are going on concerning the microbic origin of disease, some putting down all diseases as being due to the microbe or germ that has gained admission into the system. I believe this is essentially true of a great many diseases, but I just as sincerely believe there are other diseases, particularly those in which congestions first appear, that owe their existence entirely to a nervous origin, and it is under this head I class the pneumonia heretofore mentioned. It is quite possible that after the con-

gestion has occurred the germ that might be floating in the atmosphere may find a desirable habitat, but the chilling and congestion have been the primary factors of the disease. Claude Bernard by section of the sympathetic nerve of the neck caused congestion of that side of face and head, this congestion being entirely due to the loss of inhibitory power over the vessels and not to any microbe. But let us suppose for the sake of argument that the disease is due to a bacillus pneumococci, what would be the result of the action of cold applications? Here I will again mention that I am not dealing with internal medicaments. The action of the cold would reduce the temperature. In this case you will say we are treating a symptom of the disease, but when we remember that the vitality of the germ is not so great and that it does not reproduce and thrive so readily with a reduced temperature, we surely would be treating scientifically.

The eyes of all medical men, and I might say of all the thinking world, are to-day fixed upon the result of the inoculation of Prof. Koch's lymph in tuberculous patients. Up to date the composition of the lymph is a secret, but from its action it certainly is directly antagonistic to the tubercle bacillus. The injection has even been the means of assisting in a correct diagnosis of doubtful cases. When there is no tubercular trouble there is no reaction, but if there is tuberculosis its action is manifest, thus showing its antagonism to the disease it is intended to cure.

After all, does not this theory of treating diseases with what is antagonistic or opposite in its effects seem most plausible?

When the weather becomes cold we put on more and warmer garments to counteract its effect, and this being so why not reverse the rule and put on cold applications when too hot?

The surroundings frequently are not such as would sanction the application of cold water for fear of drafts, &c, and there is also another great drawback against the use of this treatment, and that is the popular prejudice there is against the use of anything cold in fevers. Years ago this also applied to the

drinking water, but after ocular demonstration of its benefit, that has somewhat died away.

Again, how often is the practitioner influenced by his client's wishes. The owner often suggesting counter-irritation because he has known of a case that recovered after being blistered, and the surgeon consenting merely for the sake of agreeing, really "doctors" the man at the expense of the horse, knowing that if the animal dies with a good smart blister applied to his sides the owner will be satisfied that every attempt has been made to bring about the animal's recovery and no blame for lack of professional skill will rest upon the veterinary attendant.

#### DISCUSSION.

Dr. Thompson thought cold applications contra-indicated, as cold had been the primary cause of the disease. Inquired of essayist if he would take a patient with a temperature of  $106^{\circ}$  and lead him to the street on a cold day so that he might have beneficial effect of cold wind to lower his temperature. Believe that if a little cold would do good in a fever, considerable cold would do more.

Answer: "The cases are in no way parallel. In the one the application of cold in the form of a wet blanket covered with a dry one, the amount of cold is limited and the bulk of the body in its heated condition will heat the wetted blanket; the shock here cannot be so severe as to cause a chill when the reaction occurs. By using the cold to sides we are merely following out nature's promptings when she causes the patient to crave for the cold water rather than the hot."

Dr. Culbert thinks the cold good, but to facilitate or do away with the changing of blankets entirely, would recommend the use of Dr. Magor's patent water bag.

Dr. Diggs: "Does essayist consider the use of cold applications to be of benefit in the congestive stage? Yes, where temperature is high.

Dr. Roberts does not favor use of blister. It prolongs cases that might be cut short. Considers blisters merely a way to make a larger bill on owner.

Dr. Culbert: "What internal treatment do you recommend?"

Any antipyretic medicine—quinine, acetanilid, salicylate of soda, &c. should work well in conjunction with cold application.

Dr. Shaffer: "I never used any external applications, but believe with Prof. Williams that in stagnating cases blisters by rousing the whole system might be beneficial."

Dr. Thompson believed blister to be of service where pleuro is affected, but not when lung substance itself is involved.

Dr. Culbert: "The only objection to the cold water treatment is that we have not as good surroundings for our patients as medical practitioners. Regarding blistering, does not think he has ever killed any with it but certainly believes he has prolonged cases."

## CASE REPORT—TENOTOMY.

By C. F. BELL, V.S.

(A Paper read before the Indiana Veterinary Association).

I have several reasons for calling your attention to this particular case. The first one is: I have, from the origin of this Association, noticed a conspicuous absence of reports of cases in practice; the second is: I believe that such reports, whether the results be favorable or not, will assist us more in advancing our practical knowledge, than any other method we can pursue.

Hence I bring before you a case in practice of which I feel (and I think justly) proud. Last August there was brought to my infirmary, a fine blue bull (roadster) colt, four months old, with contracted tendons in all four of its legs: the right front one being the worst.

Excepting the defective legs, the colt was as fine a specimen of physical development as any I ever saw at that age, and being standard bred made it quite valuable in the estimation of its owner, who was very anxious to have it successfully treated.

I took special pains to show him a dissected specimen of front and hind limbs, and explained that I was satisfied that performing tenotomy would be the only thing that would relieve the tendons.

The colt was left in my care with an injunction to not perform tenotomy until further ordered, but to try other means for relaxing the tendons; which I did, without avail, the contraction continuing to grow worse.

After two weeks the owner gave the case entirely into my hands, to do as I saw fit; and I at once performed tenotomy on the right front leg. Having four legs to operate on, I concluded to do as much experimenting on them as possible. I cast the colt, shaved all the hair off from the leg over the part to be operated on; cleaned it well with warm water and sublimated solution, using all antiseptic precautions possible.

I next looped a small rope above the foot and gave it to



an assistant to hold, and keep the leg straight. I then made an incision with a bistoury, half way between the knee and fetlock joints, at the posterior border of the perforans tendon. The incision was just large enough to allow me to insert a probe-pointed bistoury with ease—about one-quarter of an inch in length. I next took a probe and broke down the tissues, passing it in until I could feel it through the skin on the opposite side. I then put in the knife, turning the edge towards the tendon.

The assistant now pulled on the leg, straightening it; which stretched the tendon, making it tense, and easy to cut; which I did, separating the perforans and perforatus, without making the wound in the skin any larger. In this operation there was not to exceed two drops of blood. I then filled the cut in the skin with sulphate of quinia, put on a small pledget of absorbent cotton, and a light bandage.

The wound healed without a particle of suppuration. The only trouble I experienced was, the leg dropped down too much. This gave me some cause for alarm, but I concluded to go on with the three remaining legs, and see what the result would be.

In about four weeks, as near as I can remember, I operated on the left front leg, differing from the first, using no antiseptic precaution, but using a subcutaneous injection of a four per cent. solution of cocaine.

This leg not being so contracted, I concluded that it was not necessary to cut more than one tendon—the perforans, leaving the perforatus uninjured.

I then strained the leg, breaking down the tissues—the ends of the tendon separating about an inch, which could be plainly felt through the skin. I dressed the wound with quinine, placing a pledget of absorbent cotton over the wound, applied a bandage and let the colt up. The foot came to the ground in a natural position.

I was called away for two days, and on my return found the bandage still on and the leg considerably swollen.

I removed the bandage and applied hot fomentations for an hour, after which I dried the parts, and then applied

arnica and witch hazel. In the morning found swelling reduced; and in a short time the wound healed up.

As soon as the left leg was healed properly, I prepared to operate on the hind legs. I dressed the soles, and lowered the heels, as had been done with the fore feet, so the feet would be in a natural position when the tendons were severed. I, however, dressed the heels lower than natural, leaving the toes long, so as to obtain all the leverage possible.

I took no antiseptic precaution, and operated on the outside of one leg, and on the inside of the other, separating only the perforans.

In the leg I operated on from the inside, I had a little hæmorrhage, owing to the severing of a small artery. This one I bandaged; the other one was left without bandage or anything else. I could not notice any difference in their healing; neither of them swelling a particle, or developing any symptoms of suppuration.

The colt to-day is perfectly sound in three legs, standing in a natural position, and growing finely.

The first leg operated on dropped down too low, and in order to rectify this I had applied a shoe with a brace, extending from the toe along the anterior part of the leg to the fetlock joint, which was reinforced by lateral braces, extending from the heels of the shoe forward to the preceding, the leg being then retained in its normal position by means of a bandage passed around the brace and fetlock.

Present appearance indicate that within a few weeks the leg will have regained sufficient strength to permit the removal of the shoe, so that after much labor and care I hope to have a practically sound colt, and a valuable lesson from clinical experience.

#### DISCUSSION.

Dr. Thompson believed the right front leg would have done better if left entirely alone after the operation: he had had such cases and they ultimately came to natural position. Believed it is proper in such cases to raise the heel, rather than to cut it down.

Dr. Knowles.—Believed if right front leg had been left alone, it would have come all right in time.

Dr. Robert.—Had had three cases of cut tendons. One accidentally cut,

died. His second case was in a large draft horse. After operation, a shoe, such as Dr. Bell describes, was applied, and in six weeks horse was at work. In this case no shoe was put on and foot went down, and stayed down.

The essayist mentioned here that the colt had not been born with contracted tendons; for legs were natural and puffy the week before contracting. He also uses quinine in all new cuts; as in cases treated in that way there was not one-tenth the amount of suppuration, and the wounds generally heal by first intention.

## THE ADMINISTRATION OF MEDICINE.

By A. J. THOMPSON, V. S.

(A Paper read before the Indiana Veterinary Association).

One of the chief aims of this paper is at brevity, for, in the language of Sir Robert Southey; "If you would be pudent, be brief; for 'tis with words as with sunbeams, the more they are condensed the deeper they burn." My object is not to tire your patience with an exhaustive discourse on the prevalent theories regarding the administration of medicines, but in a simple way to bring before you for consideration a few simple facts of every day practical experience. I do not even promise to present anything entirely new, but shall be quite satisfied if I succeed in impressing some old truths upon our minds. "Perhaps," says Dr. Johnson, "the excellence of aphorisms consists, not so much in the expression of some rare and abstruse sentiment, as in the comprehension of some obvious and useful truths in a few words. We frequently fall into error and folly, not because the true principles of action are not known, but because for the time being they are not remembered; and he may therefore be justly numbered among the benefactors of mankind who contracts all the great rules of life into short sentences that may be easily impressed on the memory, and taught by frequent recollection to recur habitually to the mind." It is truly said that "'Tis better to know much of few things than to know little of many." A correct knowledge of the action of a few simple remedies and the proper mode of preparing and administering them so as to bring about such action, is of far more practical value than a knowledge of the theoretical action of hundreds of drugs

without knowing how to apply them. Many remedies, as we are all aware, have different actions when applied in different ways. Take for example, the simple drug, potassium nitrate, which has no less than four separate and distinct actions, neither conflicting with the others, and all depending entirely upon the amount given and the mode of administration.

The first thing to be looked at, after having diagnosed our case and decided upon the remedy to be applied for the alleviation of the trouble, is to be sure of the purity of the drug which we prescribe. In this day and age, when there are so many impurities and adulterations in all commodities, and when the adroit head of American genius can so artfully imitate nature in the consistency, flavor or odor of almost any drugs, it certainly is no small part of our duties to be sure that we prescribe only that which we know to be pure and reliable. If we prescribe white arsenic, for example, we have no assurance that our prescription, when filled, will contain the dose we intended. If on the other hand we prescribe arsenious acid manufactured by a reliable firm, we know that we always get the same strength. If we prescribe the tincture of opium we meet the same difficulty; likewise with all tinctures. The strength of tinctures will be found different in every different drug house. Fluid extracts are always of known strength and consequently can always be relied upon. We should therefore use care in prescribing only such preparations as we know to be of standard strength.

Having made sure that our drug is a pure one, our next consideration is how to prepare it for administration, and this is the most important step and perhaps the least thought of by veterinary surgeons, in all our treatment. In our preparation there are two important objects which we must seek to obtain: First: That we may get the full and prompt physiological action, and second, that we may facilitate the administration of the same. Many will prepare almost all bulky drugs in the form of a bolus, which is certainly a very unsatisfactory mode of administration. I have seen practitioners have aloetic balls prepared

for weeks before administration, and then wonder that they do not get prompt action from them when given. Others will give chloral hydrate in gelatine capsules and when they dissolve, if indeed they do dissolve at all, will cause such nausea that, were it possible, the horse would vomit up his very hoofs, figuratively speaking. If anyone believes that this is not injurious to the patient, let him try the experiment of taking into his own stomach ten grains of chloral in capsule and he will be convinced. I have known two instances where a capsule of chloral lodged in the fauces and dissolved there; you can imagine for yourselves the condition of the nasal and buccal mucous membranes twelve hours later. In both cases death resulted. I have in mind another case where an ordinary chloral ball was administered, and half an hour later the horse showed all the symptoms of the severest regurgitation and continued so for hours. The nausea\* was so severe that the horse neither ate nor drank for three days. Sometimes, as before hinted at, the stomach will be in such a condition that a capsule will not even dissolve in it, and they have been known in many instances to be passed just as they entered the stomach.

The best and most satisfactory method of administering medicine too bulky for intravenous or hypodermic injections is in the liquid form. We can generally get the same action from thirty grains of quinine in liquid form that we can from one drachm given in the form of powder. Chloral should never be given in any other form than in solution and then highly diluted†. Physics are best given simple, that is, each by itself; combining two or more, such as aloes and calomel, is positively dangerous. They should, like vermifuges, always be given on an empty stomach. I have frequently seen santonine given in powder with feed or

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\*Was this not cesophagitis and a sensation of choking, rather than nausea?—  
W. L. W.

†We have found repeatedly that after the administration of one full dose of chloral, especially in solution, the fauces are so anesthetized or the muscles of deglutition paralyzed, that drenches are afterward *very* perilous, producing serious and even fatal, strangling.—W. L. W.



in an aqueous solution. It consequently had no effect as a vermifuge, as it has been demonstrated beyond a doubt that in order to get that action you must give santonine in a solution of oil. The quantity of medicine administered should always be the minimum dose for the required effect. Nearly all practitioners give from one-third to one-half more medicine than is really necessary. We are told by our professors, and we read in our text books and journals, that the dose of medicines differs in different cases, and they account for it by saying it is due to the individual idiosyncrasies of the animals. But a far more satisfactory and more nearly correct explanation would be, for the majority of cases, that the drug used has not been of good quality ; or it has not been properly prepared for administration ; or it has not been properly administered ; or, owing to an impairment of digestion, it has not been assimilated.

Having prepared our medicine, the next step of importance is to see that it is properly given. Many practitioners leave the prescribed medicament at the stables with the hostlers and solace themselves with the vain hope that their patients are receiving their medicine at regular intervals, as prescribed. Yes, at their next visit they note with satisfaction that about the proper quantity is missing and hardly ever stop to think how much easier it is to consign it to the manure pit than to give it to the horse, and that the chances are about three to one that that is where the largest part of it has gone—perhaps sometimes to the advantage of their patient, especially if its administration requires some little trouble. Now it has been said that there is nothing like knowing how to do a thing, but I say that there is something of far more importance than knowing how, and that is, to do the thing after you know how. A practitioner should ever remember that there is but one person whom he can trust to administer medicine to his patients, and that person is himself. It therefore behooves every practitioner to give all the medicine which he possibly can, himself, and if he must trust the administration to the laity to have it prepared so that it may be given in the simplest and easiest manner.

It is a physiological fact, which is possibly not so widely known as it should be, that when an animal is suffering from acute pain, absorption from the alimentary canal beyond the fauces will take place very sparingly, if at all. When we are called to see a patient suffering from acute indigestion or colic, which has been affected for any length of time, it is consequently almost useless to administer a draught or, much more, a ball. If the case is not too far advanced we may administer a limited quantity of medicine through the medium of the buccal mucous membrane. If too far advanced, however, we will fail to get action from this mode, and must then resort to hypodermic or intravenous injections. The case may be so far advanced, that is, suffering such acute pain for so long a time, that absorption will not take place even by hypodermic, and we must then resort to intravenous medication, from which process, if our drug is pure, we will always get prompt results. It is always the safest and best plan, therefore, in such acute troubles to resort to this mode of administration from the start. All the precaution which is necessary is to prepare a solution, which, if administered hypodermically, will not cause an abscess to form and this solution can safely be administered intravenously by means of a thoroughly clean aseptic needle. Nearly all drugs which are admissible hypodermically, can safely be used for intravenous injections. The best and easiest mode of administration in the ordinary run of cases is to prepare the medicine in a concentrated form, that is, so that the dose shall not exceed from four to eight drachms, and this thrown into the fauces by means of a hard rubber syringe. Precaution is necessary, however, that the medicine is not strong enough to destroy the sensitive mucous membranes with which it comes in contact, or very serious trouble may result. If the dose must be larger, the easiest method of administration is to loop an ordinary strap over the upper incisor teeth and under the lip, pass it through a pulley or over a beam, and one man can easily administer any draught by himself.

Enemas of warm water or soapsuds are very frequently resorted to in many forms of trouble, but most frequently in diges-

tive ailments. Many practitioners place a great deal of confidence in them, but for my part I consider them almost valueless. 'Tis true rectal injections do no harm, and they afford a very good means of entertaining the owner and making him believe you are earning your money, but for actual benefit I have failed to see where it comes in. If the rectum needs evacuating, be assured that nature will assert herself and do the work far more satisfactorily to the patient than the most careful practitioner can. The rectal injection of glycerine to relieve flatulence has been highly recommended by some good authorities. I have not tried it sufficiently to condemn the practice, but have, in the few attempts made, failed to get satisfactory results.

While on the subject of glycerine allow me to offer a suggestion as to a new mode of administration. We no doubt have all been troubled with recurrence of flatulence, in some cases so persistent that we have to puncture many times, and in extreme cases leave our canula inserted for hours at a time, in order to give escape to the rapidly forming gas. I recently experimented on the injection of six or eight ounces of glycerine into the colon through the canula before removal, after puncturing and allowing the gas to escape, with the satisfaction in every case of stopping short the formation of gas. It might be well for all to remember this and try similar experiments, and report the results through some of our journals. The glycerine can easily be injected by means of a hard rubber syringe with a short, strong nozzle, by inserting into the end of the canula. There is but one case, to my knowledge, where the administration of medicine per rectum is better than other modes, and that is in tetanus. By preparing the medicine in the form of small suppositories, and, by means of a pair of long dressing forceps, previously warmed to the temperature of the body, and oiled, slipping one from eight to ten inches into the rectum, if properly done, the patient will be less excited than by any other form of administration in this trouble.

Now a word about the application of heat and moisture. There are cases where dry heat is indicated, and others where

moist heat is better. In case of a sprain in the region of a joint or ligament, or other part where there is a low system of circulation, the application of dry heat will give more satisfactory results, but if we have a bruise or an inflammation due to like cause, and where suppuration is inevitable, then moist heat in the form of warm water is the better form of treatment. If we are in the presence of an inflammation in its first stages, due to some internal cause, and where suppuration is not desired, then cold water, ice bags, etc., are indicated.

#### DISCUSSION.

Dr. Bell does not see how so large a thing as a capsule can pass through the pyloric orifice of stomach unless dissolved or digested. How does essayist give aloes? In solution.

Dr. Macaulay.—In giving medicine two things have to be considered, the man and the patient. Believes the quieter we can give medicine, say to a febrile patient, the more good it will do, it not resisting; for this reason always uses hard rubber syringe, and while patient gets medicine without objecting, the practitioner's clothes are not soiled. Has never found aloes and calomel dangerous.

Dr. Roberts.—Capsules kept a long time become very hard and difficult to dissolve. Is very fond of administering medicine in capsules.

Dr. Thompson would like if some of those present would, when opportunity occurred, try administration of glycerine into intestines per canula, and report success.

### INDIGESTION IN THE HORSE.

By J. RODGERS, V.S.

(A Paper read before the Indiana Veterinary Association).

This is a disease found more among heavy breeds of horses, and is divided into chronic, acute, impaction, and engorgement. The three last are similar to each other. You may find indigestion without impaction or engorgement, but either of the two latter will have acute indigestion. They may also be classed as dietetic diseases. We seldom find that they originate from chronic indigestion, but from too much feed. Chronic indigestion is due to a deranged system, caused by feeding inferior food, but can be brought on by dentition, the teeth getting irregular, and especially

in a young animal, where they do not properly shed the temporary molars. This disease may become acute if not carefully and properly attended to. The stomach of the horse is small compared to the size of the animal, and digestion necessarily takes place quickly. I have noticed in making post-mortems that the stomach is not in proportion to the size of the individual. A heavy draught horse's stomach is not as large as in some of the fine breeds, which makes the disease more fatal in the heavier class. Acute indigestion, impaction and engorgement, as I said before, are classed as dietetic diseases. Their symptoms are hard to distinguish separately. Impaction and engorgement generally terminate fatally, as the contents cannot be removed surgically as in the ox. Engorgement is formed in all classes of horses, but more in the heavier breeds, and especially where they are fed cooked food. Acute indigestion is often found in the young animal from allowing the dam to become heated and permitting the colt to suckle, or it may be brought on from allowing the colt to drink cold milk. The symptoms of these diseases are similar. The animal will suffer more or less pain, look around at the sides, paw and strike with the fore feet. One of the most prominent symptoms is eructation of gas. A horse suffering in this way, when lying down will not fall as in colic, but will lie down quietly. I do not find this always the case, for sometimes after flatus has formed in the bowels they will then lie down and roll over. If there is a partition or wall in the stall the animal will frequently get the feet above the level of the body. This is not the rule; I find that an animal generally will lay stretched out. The breathing will be short and quick and the pulse irregular, 60 to 80 per minute. There will be profuse perspiration, in some cases cold, especially in rupture. Upon making enquiry you will find he has had too much food, either intentionally or accidentally, or if in a young animal having suffered from diarrhoea previous to or at the time. The chances are the animal has been suffering from chronic indigestion probably due to dentition. If such is the case and diarrhoea still ensues, gas generally generates quicker than it would had the



animal not suffered from diarrhœa, arising from the foetid material in the bowels, together with the food in the stomach. If relief is not given at this stage of the disease, with the walls of the stomach paralyzed, there will be rupture of this organ, or diaphragm, or bowels. Impaction of the stomach is generally due to eating dried grasses. One of the most prominent symptoms is eructations of gas, short, labored breathing—in fact a grunt is the way to express it. Engorgement is due to feeding on rich, soft food, such as cooked grains and roots, turnips and potatoes. This disease generally terminates fatally, as rupture of the stomach soon follows and death ensues.

There are a great many different remedies used in treatment. These last two or three years eserine has been used by some with good results, while others have abused it by using for everything and then condemning it. I have used several different remedies. Eserine injected into the trachea in 1 to 2 grain doses acts as a narcotic, depressant and cathartic. I have used as high as three grains and had good results. I find the trocar a very effective instrument in this disease, also oil of lini, terebinthæ and aqua ammonia, given in doses to suit the requirement of the animal. I do not believe in the use of much morphine, as it stops the action of the abdominal viscera. Aconite is good in some cases, but only as a febrifuge; given in large doses with eserine you will get a very depressing effect. Always give enemas, as they have a tendency to remove flatus and hasten the action of the bowels. I have used for some time eserine  $1\frac{1}{2}$  grains, atropia 1 grain, injected into the trachea, followed up with morphia, 2 grains, into the vein. With enemas, the trocar when necessary, and warm cloths to the abdomen, I await results.

#### DISCUSSION.

Dr. Shaffer.—Does essayist ever use pilocarpine with eserine? No, because sweats are already profuse enough; combines eserine with atropia.

Dr. Ferling.—Do horses ever vomit and recover? No. Dr. Ferling here related a case where this regurgitation occurred and animal was well and eating hay in half an hour.

Dr. Macaulay.—Very partial to pulverized charcoal and sal soda when

eructations of gas are present. Never had used eserine in indigestion, but in cases when it was used always combined pilocarpine, as it appeared to lessen the severe griping caused by the eserine alone.

Dr. Culbert.—Does essayist give eserine when patient is weak? No, it is too depressing. If there is no response to eserine give oil.

## LEUKÆMIA.

By Geo. G. VANDERVEER, D.V.S.

(A Paper read before the Long Island Veterinary Society).

In the absence of veterinary literature upon this subject I am indebted to the works of Ziemsen and Pepper for the data necessary for the formation of this paper.

The earliest investigations as to the nature of this disease are those of Bennett and Virchow, which were published in the autumn of 1845. Bennett supposed that the altered condition of the blood was due to the presence of pus, and it was not until six years later, 1851, that he abandoned his theory and gave the name leucocythæmia to the disease.

Virchow's reseaches led him from the first to assign the cause of this white blood to leucocytes. Two years later he published an article in which he considered the conditions under which there might be an increase of the white cells, and their relations to the spleen, and also proposed the name leukæmia.

In 1853 Virchow separated two forms, splenic and lymphatic, and in 1869 Neumann discovered a myelogenous form.

Leukæmia is characterized by a great and persistent increase in the white blood corpuscles, together with a simultaneous decrease in the red cells, but it is unknown whether this relation is due to an arrest of the transformation of white into red cells or to an increased supply of white cells, or whether both of these causes act together.

Little is known as to the causes of the disease, but all the factors which tend to produce primary diseases in the spleen, lymphatic glands and bone marrow should be considered.

As to climate more cases have been reported in temperate regions than in the tropics.

It attacks all ages, but males are more prone to its ravages than females in the proportion of at least 2 to 1.

It is more common among the poorly housed and fed than among those who enjoy better sanitary surroundings.

Previously existing diseases may have an effect in producing the disorder, prominent among which is mentioned malaria, while pre-existing hemorrhages, and injuries from blows and strains are frequent in the histories of cases.

There is extreme wasting, œdema is common, and ascites may often be present. The full amount of blood in the heart and blood vessels, usually in the form of large clots, is a noteworthy feature, and the collections of white cells densely infiltrating these clots, present a pus-like appearance.

In the majority of cases the spleen is hypertrophied, the splenic tumor is always of considerable size, and generally retains its normal form, developing proportionally in all its dimensions. It is usually bluish-red in color, and may be united to the abdominal wall, diaphragm or stomach by strong adhesions. The capsule is thickened and the vessels enlarged. The organ is hard and firm and cuts with resistance, and grayish-white granular tumors may occur either scattered about or arranged in rows throughout its whole extent. In the early stages there is swelling of the pulp and increase in the cell elements without the firmness and hardness of the fully developed leukæmic organ, and at this period rupture may occur.

Uncomplicated cases of the lymphatic form are rare, usually the lymphatics enlarge with the spleen and in the majority of instances the hypertrophy is not extensive. The process seems, just as in the spleen, to begin with a greater flow of blood, and an increased vascularization, under the influence of which the multiplication of glandular elements takes place. The groups of cervical, axillary, mesenteric, and inguinal glands are the most frequently affected; they are moderately soft, movable, and isolated; in chronic cases they may become very indurated.

The bone marrow is usually the seat of important changes, both in the central cavity of the long bones, and in the cancel-

lated structure of the ribs, the sternum, and the vertebræ, the marrow has the same greenish-yellow, purulent color, and the same consistency as mucous pus. Under the microscope it may be seen that cellular elements of the same nature as those occurring in leukæmic blood, form the principal constituents.

The liver is very commonly enlarged, it is pale, smooth, lead and retains its shape. The substance is usually firm, of a grayish-brown color, or may be marbled. Two chief changes have been met with: a diffuse leukæmic infiltration, and numerous small leukæmic tumors.

The kidneys are usually pale, and often enlarged, the capillaries may be distended with leucocytes, and leukæmic tumors may be found, generally in the cortex.

The respiratory system is not often the seat of important lesions. Lymphoid growths have been found in the mucous membrane of the trachea and bronchi, and occasionally in the lungs, where they may closely resemble tubercles, but differ from them in having no tendency to caseate or soften.

In the digestive system the stomach rarely presents any change other than catarrhal; the intestines have in many cases been the seat of tumors which have originated in the solitary and agminated glands. In a few cases the bowel lesions have been so pronounced that the term intestinal leukæmia seemed justifiable.

The changes in the blood are so characteristic that they form the most prominent mark of the disease; the lighter color is more and more marked as the disease progresses; the increase of leucocytes is continued and progressive, leading in its regular progress to the death of the patient. The proportion of colorless corpuscles, finally reached, is very great, as high as 1:3 or 1:2. The number of red corpuscles is not only relatively but absolutely diminished. The specific gravity is lowered; the water and fibrine are increased, and iron considerably diminished.

The most prominent symptoms are weakness, exhaustion, difficulty in breathing, paleness and emaciation, and profuse sweating.

Among the most striking symptoms of splenic leukæmia are to be reckoned hæmorrhages.

The intestinal evacuations are interfered with; at first constipation alternates with diarrhœa, while later the diarrhœa predominates, become copious and frequent, and sometimes bloody.

The urine excretion is in most cases normal in quantity, but towards the end always diminished.

In most cases a considerable disturbance in the temperature is manifested; in the early stages there is only slight variation, but where the disease is well advanced there is always fever of the remittent or of the continuous type.

The appetite, in most cases normal, is rarely diminished, but is sometimes much increased.

The complications may be summed up as serous or sanguineo-serous exudations into the cranial, pleural and abdominal cavities, œdema and congestion of the lungs, pleuritic and peritoneal inflammations and adhesions, and thrombi from the plugging up of the vessels by leucocytes.

The course of the disease is slow and chronic. In exceptional instances, usually in young subjects, it runs a rapid course; but acute leukæmia is rare.

Death takes place usually by asthesia, a gradually progressive weakness, and finally heart failure. Diarrhœa and hæmorrhages hasten the result. Pyæmia and rupture of the spleen are mentioned as causes of death in some cases.

The positive diagnosis depends upon the determination of a great and persistent increase in the white blood corpuscles.

The prognosis is unfavorable in the highest degree. When firmly established, the spleen and glands enlarged, the blood condition marked, and hæmorrhages and dropsies present, death is the only termination to be expected.

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## SOCIETY MEETINGS.

### THE INDIANA ASSOCIATION OF VETERINARY GRADUATES.

The annual meeting of the Indiana Association of Veterinary Graduates was held at the State House, Indianapolis, January 7th and 8th.

On the evening of the 7th, in the absence of the President and Vice-Presidents, the meeting was called to order by the Secretary, Dr. H. Macaulay.



There were present at the opening or during the session, Drs. Knowles, Thompson, Diggs, Macaulay, Roberts, Culbert, Bell, Shaffer, Ferling and Rodgers.

The minutes of the previous meeting were read and approved, and after the transaction of preliminary business the election of officers for the ensuing year took place, resulting as follows: President, Dr. J. Rodgers, of Anderson; First Vice-President, Dr. G. Ferling, of Richmond; Second Vice-President, Dr. J. Culbert, of Portland; Third Vice-President, Dr. G. Buckner, of Rockville; Secretary, Dr. H. Macaulay, of Indianapolis; Treasurer, Dr. E. Diggs, of Winchester.

The newly elected President, Dr. J. Rodgers, now took the chair, and the first paper of the meeting was read by Dr. E. Diggs, on Rheumatism, which was followed by a spirited discussion.\*

The meeting then adjourned until nine o'clock the following morning, when it was called to order, the President, Dr. Rodgers, in the chair.

Dr. Macaulay then read his paper on "Counter-irritation versus Cold Applications in Pneumonia."\*

After a spirited discussion of Dr. Macauley's paper the meeting adjourned for dinner and met at 1:30 P.M.

Dr. Knowles in a short address moved, seconded by Dr. Thompson, that the following resolutions be passed:

*Resolved*, That Dr. F. S. Billings be made an honorary member of this Association.

*Resolved*, That it is the sense of the Indiana Association of Veterinary Graduates that the investigations of Dr. F. S. Billings in contagious and infectious animal diseases have been the only investigations of merit made in these United States. And be it further

*Resolved*, That we feel indebted to Dr. Billings and the State of Nebraska for these investigations. And be it further

*Resolved*, That since the State of Nebraska had Dr. Billings in her employ at the time these investigations were made, and that in our belief Dr. Billings can give the agricultural and scientific world farther enlightenment on infectious and contagious diseases, we therefore request the State of Nebraska to re-employ Dr. Billings for said investigations. And be it further

*Resolved*, That a copy of these resolutions be sent to Dr. Billings and to the State University of Nebraska, and that they be spread on the minute book of this Association.

These resolutions were passed unanimously, and it was just at this moment Dr. Macaulay arrived, and at the request of Dr. Knowles the President read the resolutions over for his benefit.

Dr. Macaulay was sorry he had been detained so as to have been unable to be present when these resolutions had been moved, as he considered it was something with which we, as a society, should have had nothing to do. He understood that Dr. Billings' views on many subjects were at variance with a majority of our leading veterinarians, and by siding with Dr. Billings in this case we were making ourselves antagonistic to them. If any such set of resolutions were to have come before the Association he believed they, the members,

\*See original articles of this issue.

should have been warned of it in order to satisfy themselves that if they took any steps at all it would be in the right direction. The resolutions were passed and his protest he knew amounted to nothing, but he made it, nevertheless.

Dr. C. F. Bell, of Kokomo, Ind., now favored the Association with a report of an interesting case in which he had performed tenotomy on all four legs of a foal successfully, remedying a serious contraction of the flexor tendons, which was followed by the usual discussion\*.

Dr. A. J. Thompson next read a very able paper on "The Administration of Medicine,"\* which elicited a hearty discussion, in which nearly all members present took part, and this was followed by a paper on "Indigestion," by Dr. J. Rodgers.\*

Moved by Dr. Ferling, seconded by Dr. Diggs, that the next meeting of the Association be held in Richmond in June, the date not yet to be decided on.

The President then named essayists for the next meeting.

The meeting then adjourned.

H. R. MACAULAY, *Secretary*.

#### NEW YORK STATE VETERINARY MEDICAL SOCIETY.

The first annual meeting of the New York State Veterinary Medical Society was called to order by President Morris, January 16th, at 2 P.M., at Syracuse, N. Y.

The following members responded to the roll-call by the Secretary, Dr. N. P. Hinkley.

Drs. Jno. A. Bell, James Carnrite, A. Drinkwater, W. G. Dodds, O. B. French, Wilson Huff, N. P. Hinkley, J. C. Hill, E. D. Hayden, Pros. James Law, Drs. C. H. Moulter, Claude D. Morris, M. M. Poucher, D. K. Seltzer, Robert Somerville, Harry Sutterby, Frank Sutterby, John Wende.

Letters and telegrams of regret were read from Prof. Liautard, New York; Prof. Smith, Toronto; Dr. A. L. Hunter, Dr. A. N. McQueen, Dr. Charles Cowie, and several others.

President Morris then read his annual address as follows :

One year has elapsed since our Society was organized. Our first annual meeting brings us to the consideration of but one potency. Is it a success, or a failure? The former seems to be the result.

It is most gratifying to watch the progress and deep interest that is being taken, in and out of the Society.

Gentlemen who are members of the profession, but not members of the Society, are keeping close watch as to the probable outcome of the organization, desiring to affiliate themselves with it at no distant day. The regular medical profession is none the less interested, as its members are aware that a centralization of the scientific powers and resources of the veterinary profession would be a potent factor in the development of some of the obscure causes in zymotic diseases. The two professions should go hand in hand, as our aims are one, our interests identical.

See original articles of this issue.

While we have not attained all that we thought we were entitled to possess along the line of needed reform, we have, however, taken some advanced and sure steps on this line. We are learning to admire the old adage, that "The top is not reached at a single bound; we must climb the ladder round by round." We have met with reverses and disappointments in legislation, but it would not be legislation worth having unless it did meet with opposition. Hard fought battles make the victory more complete. Reforms of all kinds come slowly; the way must be paved with patience and fortitude. To my mind the horizon never seemed brighter. The medical enactments that were passed during the last session of the Legislature, are a strong lever in our behalf, as our desires are along the same line.

The bond of social union that has been created in the profession, solely through the organization during the short period of but one year, is most praiseworthy indeed. It has brought members of the profession from all quarters of the States, into such genial propinquity with each other that the profit has been far-reaching in its results, not only of a social, but of a professional character. It is the highest ideal of your presiding officer that the IId section in the by-laws be realized, viz.; The objects of the Society are, to aid in regulating the practice of veterinary medicine and surgery in the State, and to contribute to the diffusion of true science, and particularly to the knowledge of the healing art, and to unite our energies, efforts, and sympathy, for the mutual benefit of all its members. When harmony and union exist in a family, or in an organized society, then there are no obstacles; whatever is wanted can be had; it is only a question of time. All we need is to keep in concord, and we shall have all consistent and needful things.

But we must keep our aims pure and high. Our ideals must reach up into the realms that seem at present almost impossible, and then attain unto the utmost, because no man ever went beyond his ideal, and none of us must ever feel that "now I have reached the climax." There must be a constant improvement in all our professional relations. Let the search and the research in those diseases which seem to be obscure and most difficult, be untiring, and never yield until you have conquered. Be a "crank" on some one thing, and win on that line. Had it not been for "cranks" there never would have been a Jenner, Pasteur, or Koch.

Gentlemen, in the future our profession will have fame; let you and I help to make it such. Our relations in the medical world are important. The position we occupy is one in which we can be of great value to our fellow men. Our energy and skill can determine in a measure the health and longevity of the nation, and as a profession at large it is our imperative duty to search out the evils that we know to exist, and apprise innocent consumers of flesh and milk of the dangers that are daily spread upon their tables. Many diseases of a contagious nature reside in the animal economy, obscure and unnoticed by the casual observer, and not unfrequently by the careful practitioner in its incipient form, and during this period of germinative quiescence there is being developed a living cess-pool of contagion, endangering the health and vigor of the remaining herd and a menace to human life. It is under these conditions that we should awaken to a comprehension of the responsibility resting upon us.

So far as has come under my notice there has only been the usual advance in the progress of the art during the last year. There has been nothing of so signal a character as the introduction into the medical realm of so beneficent a factor for man's good as that brought forward by Prof. Koch in the form of his inoculous lymph, and which is thought to be, and I sincerely hope will prove to be, a specific for tuberculosis in man. Prof. Koch has not only opened an avenue in the medical profession which is of vital importance, but he has opened a broad field to the veterinary profession for development and investigation. If the ravages of this disease can be abated and eventually cured in man, it is only reasonable to suppose that the same results could be obtained in the lower animals. It is a question beyond any doubt that tuberculosis is transmissible not only from one animal to another, but from the lower animals to the human family. And this contagion is carried either in rare cooked meat, in milk or through the air, and any one animal can contribute through all of these channels. It has always seemed to me that to order the destruction of an animal because it is suffering from a contagious disease is an acknowledgment of an imbecile profession and a menace to the function of the art.

It would seem, and I am glad that there is an appearance now presenting itself to the profession, that if so baneful and prevalent a disease as tuberculosis in the lower animals can (in its incipency) be abated, if not cured, and thus render the ox serviceable, not only as a beast of burden, but as a wholesome article of diet. The products of our labor are two-fold; we are not only expected to relieve and palliate the pains and sufferings of the animals, but to restore them to perfect usefulness. And it is only in this last degree that society looks upon our labor as a success. Thus, though the phenomenal advance made by Prof. Koch in his being able to control and seemingly handle at will so noxious a disease as tuberculosis in man, why cannot we, when this inoculous lymph can be procured in sufficient quantities, operate upon the lower animals, because the same degree of merit must exist in the animal economy as in human flesh, so far as its effects is concerned in destroying the bacilli? At least Prof. Koch found the disease easily succumbing while experimenting upon animals. These suggestions may seem to some visionary and unwarrantable, but if I understand the function of our science, it is to cure diseases, and not to destroy the animal because it is suffering with disease. At least to the energetic and inspiring surgeon the field for labor is very broad, especially if we stop to consider the millions of money that is invested in live stock in our State. In 1880 the total number of live stock in our State amounted to 5,806,808, and were divided as follows: horses, 1,000,000; cattle, 2,339,721; sheep, 1,715,180; swine, 751,907; also mules not mentioned in the total, which number 5,000.

At a moderate estimate we had in 1880: \$50,000,000 worth of horses, \$28,079,652 worth of cattle, \$6,003,130 worth of sheep, and \$4,511,442 worth of swine.

It is safe to say that we have in the State \$100,000,000 worth of native-bred stock, to say nothing about the fancy-bred horses and cattle, which number many thousands and are worth many millions of dollars.

It is the enormous wealth in live stock that inspires me to devote my every energy in searching among and finding the hidden facts in the mysteries of our

noble science. And it should be the motive of every gentleman connected with the profession to develop some of the obscure features that are met in ordinary practice and give the result for the enlightenment of the art. Therefore, gentlemen, I would recommend that every member of the Society, especially, devote a small portion of his time to the study, and to the preparation according to the best of his understanding, of a suitable thesis on some one or more subjects that have come under his personal observation and care, by developing the subject through experiments or otherwise, and that the same be published either in a quarterly, semi-annual or annual report of the progress of the art during the year in this State. And in a short time a collection of these papers in book form would become a valuable adjunct to the library of the veterinarian.

There are many questions of vital importance which I could recommend for your consideration, but as we cannot have all at once, we must take the more important ones first, and attain unto the rest as our needs demand.

This question of legislation, which is of great importance to every member, is one we must solve during the present session of the Legislature, and the only way in which it can be solved is by a liberal unanimity and the cemented support of every member of the Society.

Gentlemen, without recommending any further business for your consideration, as a few matters well disposed of are better than many things partially done, I hope that the Society will act harmoniously and liberally, as the only way to move the load is to put your shoulder to the wheel.

The President then asked the Board of Censors to investigate the credential, of applicants for membership. The Chairman of the Board, Dr. N. Sutterby, then reported in favor of the following gentlemen: Dr. Louis Robinson, Buffalo, N. Y.; Dr. Wm. Kirk, Niagara Falls, N. Y.; Dr. J. M. Chase, Poplar Ridge, N. Y.; Dr. P. K. Sidebottom, Rochester, N. Y.; Dr. Geo. Gowland, Auburn, N. Y.; Dr. H. S. Wende, Tonawanda, N. Y.; Dr. E. A. Wieland, Buffalo, N. Y.; Dr. Wm. H. Carpenter, Johnstown, N. Y.

On motion of Dr. H. Sutterby, seconded by Dr. Drinkwater, the above gentlemen were duly declared elected members of the Society. The Secretary then read the minutes of the last meeting, all of which was approved as read.

There being no unfinished business the President called upon the Chairman of the Committee of Arrangements for his report. Dr. Hinckley read the report, which was duly accepted with thanks.

Dr. Sutterby here took occasion to ask the opinion of the members as to having one day's session instead of two, at the regular meetings, giving as a reason that it was taking up too much valuable time. He thought if the members could come to the place of meeting the night before and call the meeting to order early in the morning, that the business might be properly done in one day. Dr. Bell opposed and gave good reasons for having two days' session. Several members entered into a discussion about making the change. It was put to a vote which resulted unanimously in favor of a one days' session and so declared. Then followed the report of the Committee on Publications, which was also accepted.

The report of the Committee on Legislation was then called for. The Chairman, Dr. C. D. Morris, briefly outlined the present so-called law, and also re-



ported why the proposed law was defeated at the last session. He also spoke about the lack of knowledge about the veterinary art of some of the members of the Legislature, also the want of union among the veterinary surgeons. He also read the proposed act for the benefit of new members and to have the opinion of all the members expressed. He strongly urged the necessity of prompt and united action of all qualified men in the State of New York, and suggested a committee be appointed by the Society to go to New York and Brooklyn to personally interview the professional men there, and try and get their hearty co-operation in our course. Also for the same committee to appoint two or three members of the committee to remain at Albany to urge the passage of our new bill. Dr. Carnrite asked the Chairman if the facts of how our milk, meat and dairies were inspected, and the want of veterinary surgeons on all Boards of Health, was properly explained to the members of the Legislature last year. Dr. Morris answered that it had been thoroughly explained to them.

Dr. H. Sutterby asked if it would not be better to ask the co-operation of all local State Societies to use their influence in getting the proposed bill passed.

President Morris said that was his object in getting a committee to go to New York and Brooklyn, to have a personal interview with the professional men and to get their views in this matter.

Dr. Sidebottom asked for the present law of registration, which was read by the Secretary.

Dr. Carnrite asked who was responsible for the present law.

President Morris answered that the present law was framed to put a stop to new *unqualified* practicing, and in time only qualified men would remain. But the quacks had brought influence to bear, and had the act extended from year to year.

Dr. John Wende wanted to know what was to prevent the present law from being extended again.

President Morris said that Governor Hill had said it was the last time he would sign the extension.

Dr. H. Sutterby moved that the proposed act be printed, and a copy placed in the hands of every member of our Society. Also a copy sent to every veterinarian "who was a graduate of a veterinary college or university" in the State of New York. Also to have a fund subscribed by the members of the New York State Veterinary Medical Society to defray the expenses of the committee to go to New York, Brooklyn and Albany, to assist in getting the new proposed act passed. The motion was seconded by Dr. Huff and carried.

Dr. H. Sutterby asked for the reading of certain sections of the bill for the information of some members present who were somewhat in doubt.

Dr. Bell asked how many would be needed to go to Albany and about how much money would be required.

President Morris said one member would be sufficient. Dr. H. Sutterby said send three members. Dr. J. M. Chase said send two members.

Dr. Carnrite thought there would be no objection to this proposed act from the public, but only from unqualified men and their friends.

Dr. Chase said that in his county there were three graduates and forty-two unqualified men.

Dr. Drinkwater said he had talked with a few prominent unqualified men, who said they proposed to ask for a clause in the new bill to graduate the age of men to come before the Board of Examiners, those under the restricted age to be obliged to attend college and graduate before practicing.

Dr. W. G. Dodds fully agreed with Dr. Drinkwater regarding the intentions of unqualified men.

Dr. Sidebottom cited the English law on veterinary practice of qualified men, and registered men having a right to practice as such.

Dr. Wende said that was just the law we have in New York State at present; the trouble was that the time allowed for registration being extended from year to year.

Dr. Hinkley thinks we will have to go slow, and get our laws and wants by degrees and to follow in the footsteps of our brother professional men, the medical doctors, who had been trying a good many years before they had the present law enacted.

Dr. Sutterby wanted individual petitions procured and sent to every member in the State.

Dr. Gowland thought we must be careful and get the proposed act into the hands of our friends only.

Dr. Carnrite asked if Prof. Liautard assisted in framing the proposed law, and if he was in favor of it.

Dr. Morris thought that Prof. Liautard was always willing to aid in the passage of any law or any movement that was made to promote the standing of the qualified veterinarian and the profession at large, and was certain we could depend upon his assistance.

Several members discussed the feeling between the professional men of the Eastern and Western part of the State, and all agreed that we should have "No East, No West," but one good organization, East and West combined, to protect ourselves.

Dr. Carnrite said that even some of the qualified men were acting in company with quackery, putting up proprietary medicines and issuing certificates of practice to young men who pay them for them. He also stated that if the public would only investigate, they would see that the proposed bill was more for the protection of the public than ourselves.

Dr. H. Sutterby's original motion was then put to a vote and carried.

Dr. Bell moved that President Morris and Prof. Law be appointed a committee to attend to the passage of the bill at Albany, and to try and get the assistance of Prof. Liautard and other prominent members of the profession to aid. Motion seconded by Dr. John Wende, and unanimously carried.

A motion was then made and seconded to adjourn until 8 P.M., to allow members to get supper.

#### EVENING SESSION, JANUARY 16TH.

Meeting called to order by President Morris at 8 P.M.

The discussion on legislation was continued.

Dr. Bell made a motion that President Morris be made a committee of one to call on members of the profession in New York and Brooklyn; motion was seconded by Prof. Law and carried by unanimous vote.

President Morris then called for the report of the committee on by-laws.

The report was read by Secretary Hinkley, stating that sections ten and eleven, also Code of Ethics and a list of all members had been added to the By-Laws. These were the only changes or additions made up to date. Report accepted and voted on. Carried unanimously.

\* Report on constitution was called for, but owing to the absence of the Chairman no report was made.

Dr. H. Sutterby made motion to proceed to elect officers for the ensuing year. Motion seconded by Dr. Drinkwater; voted on and carried.

The election of officers for the ensuing year then took place and resulted as follows: For President, Claude D. Morris, V.S., Bath, N. Y.; Vice-President, A. Drinkwater, V.S., Rochester, N. Y.; Secretary, Nelson P. Hinkley, D.V.S., Buffalo, N. Y.; Treasurer, W. G. Dodds, V.S., Canandaigua, N. Y.; *Board of Censors*, John Wende, V.S., Buffalo, N. Y.; H. Sutterby, V.S., Batavia, N. Y.; John A. Bell, V.S., Watertown, N. Y.; G. H. Summerfeldt, V.S., Gouverneur, N. Y.; A. L. Hunter, V.S., Watkins, N. Y.

Dr. Chase made a motion, seconded by Dr. Huff, that an adjournment be taken until 9 A.M., January 17th. Carried.

#### SESSION OF JANUARY 17TH.

Meeting was called to order at 9 A.M., January 17th, by President Morris, who appointed the following committees to act during the ensuing year:

*Committee on Arrangements*.—W. H. Carpenter, V.S., Johnstown, N. Y.; P. K. Sidebottom, V. S., Rochester, N. Y.; Geo. Gowland, V.S., Auburn, N. Y.

*Committee on Publication*.—L. A. Robinson, V.S., Buffalo, N. Y.; H. S. Wende, V.S., Tonawanda, N. Y.; Wm. Kirk, V.S., Niagara Falls, N. Y.; E. A. Weiland, V.S., Buffalo, N. Y.; N. P. Hinkley, D.V.S., Buffalo, N. Y.

*Committee on Legislation*: Prof. James Law, Ithaca, N. Y.; N. P. Hinkley, D.V.S., Buffalo, N. Y.; C. D. Morris, V.S., Bath, N. Y.

*Committee on By-Laws*: Robt. Somerville, V.S., Buffalo, N. Y.; J. M. Chase, V.S., Poplar Ridge, N. Y.; O. B. French, V.S., Honeoye Falls, N. Y.

*Committee on Constitution*: Frank Sutterby, V.S., Lyons, N. Y.; James Carnrite, V.S., Amsterdam, N. Y.; J. G. Hill, V.S., Sennett, N. Y.; M. M. Poucher, V.S., Oswego, N. Y.; Wilson Huff, V.S., Rome, N. Y.

President Morris then called for the report of the Treasurer, and appointed Drs. Chase and Sidebottom an Auditing Committee.

Report read and accepted by Auditing Committee.

The report of the Secretary was then called for, read and accepted.

A motion was made and seconded that an assessment be made on each member, the amount raised to be used toward paying expenses of legislation. A subscription list was also started and the members present contributed very handsomely, knowing the money raised is to be used for promoting the welfare of the qualified veterinarian and procure laws to protect the public at large.

President Morris then called upon Prof. James Law to read his paper.

A discussion on Prof. Law's paper followed, in which all members took an active part. Prof. Law explained how in making his searches and researches with the action of lymph "as prepared by Prof. Koch" and otherwise, his subjects being the swine and thoroughbred cattle both in England and this country, he had proven that Prof. Koch's experiments were not the first on record.

The President then called on Dr. Drinkwater to read his paper.

A discussion followed in which it was decided by the members present that it was necessary that all qualified practitioners of the State should adopt a form of certificate to be given to the owners of horses examined for soundness.

Motion was made and seconded that an adjournment be taken until 2 P.M. Carried unanimously.

#### AFTERNOON SESSION.

Meeting called to order at 2 P.M.

Dr. Morris then read his paper.

A very lively discussion followed and several expressed their opinion as to the different modes of treatment in diseases of the eyes and the remedies used.

The President then called on Dr. Bell to read his paper.

Dr. Bell's paper was fully discussed by all members present, as was also his mode of treatment in ergot poisoning.

President Morris then called on Dr. Jno. Wende to read his paper.

A discussion was entered into on Dr. Wende's paper by all members present and continued until a late hour.

A motion was made and seconded that we tender a vote of thanks, and compliment the essayists for the interest displayed in reading their papers for the benefit of the members and the able manner in which they had prepared them. Carried unanimously.

A motion was made and seconded to adjourn until the semi-annual meeting to be held in July, 1891, subject to the call of the Secretary. Carried.

And thus closed one of the most interesting and enthusiastic meetings ever held by the New York State Veterinary Medical Society.

#### OHIO STATE VETERINARY MEDICAL ASSOCIATION.

The eighth annual meeting of the Ohio State Veterinary Medical Association was held in Wells Post Hall, Columbus, Ohio, Jan. 14, 1891. The meeting was called to order at 2 P. M., with President Geo. Butler in the chair.

Roll call was answered to by the following: Drs. J. S. Butler, G. W. Butler, E. S. Barnett, T. B. Colton, J. Charlesworth, C. Christman, W. F. Derr, W. C. Fair, J. D. Fair, W. H. Gribble, W. R. Howe, T. B. Hillock, T. Kerr, W. A. Labron, A. H. Logan, J. C. Meyers, Sr., N. C. McLean, J. V. Newton, Walter Shaw, E. H. Shepherd, W. J. Torrance, W. E. Wight, J. M. Waddell. There were also present Prof. Townsend and Drs. Jones, King and Bretz.

Minutes of previous meeting read and approved.

The President then rendered his annual address in the following novel manner:

Gentlemen, we extend to you all  
A Happy New Year's greeting,  
As we are pleased to see you here  
At this, our eighth annual meeting;  
Though many members being absent  
Causes all of us more regret,  
Yet our number is sufficient  
That a pleasant time be spent.

And we trust that in some manner,  
Perhaps by some persuasion,  
Our membership will be induced  
To come, on the next occasion;  
For it surely must be gratifying  
To all assembled here,  
That the science of veterinary medicine,  
Is by no means in the rear.

It is customary for Presidents  
To read a long and fine address,  
But we shall ask of you to-day  
To accept a little less,  
And, with your kind permission,  
A few thoughts here relate  
Before proceeding with the business  
Of the V. S. Association of Ohio State.

Energetic and progressive,  
And talented men of mind  
Are making rapid progress  
In science of every kind,  
And many eminent M. Ds. we know  
Deserve the honor claimed,  
While of honored veterinarians  
Many can be named.

There's a host of ardent workers  
In America and France,  
All eager in the strife to place  
Medicine in advance;  
And in England, Scotland, Germany,  
And Italy beside,  
Men laboriously are working  
With equal zeal and pride.

Until recent years, contagious diseases,  
Although found far and wide,  
Baffled the most competent  
Their causes to decide;  
But chemistry and the microscope,  
With human aid combined,  
Have obliterated darkness  
And left ignorance behind.

Cholera, glanders, typhus,  
Yea, a dozen more,  
Have their germs, and do not come by chance  
As thought in days of yore;



Even osteo sarcoma  
Was for years our diagnosis  
Of that which now we designate  
As actinomykosis.

And just think for a moment,  
What's been done, if you please,  
With rabies, chicken cholera,  
Anthrax and silk worm disease ;  
And the recognition of a bacillus  
Makes sure the diagnosis  
Of that terrible disease  
Known as tuberculosis.

And should Koch's new discovery  
Prove equal to the test,  
Of all the late achievements  
Koch's last will be the best ;  
But if to bovine practice  
He would his skill apply  
We'd sooner ascertain the fact  
If upon his lymph we could rely.

In the study of certain diseases  
Including those of swine  
Our much esteemed Americans  
Are falling into line ;  
And may the ultimate result  
Of this, their grand endeavor,  
Stamp their names, as monuments,  
That will safely stand forever.

And, in this connection,  
Cure, prevention, and relief,  
Pasteur has capped the climax  
And made himself the chief ;  
So thus, on every side we see  
Such rapid progress made,  
And startling developments  
In every new decade.

E'en for the different operations  
That cause our patients pain,  
We should use chloral, ether,  
Chloroform or cocaine,  
For we know, to be successful  
And a sterling reputation gain,  
We must always in our daily life  
Strive to be humane.

A veterinarian's duty  
Is to anæsthetics use,  
And to operate without them  
None can give a good excuse ;  
Simple ovariectomy or castration,  
While the animals yet are conscious,  
You must admit ; to say the least,  
Is cruel and obnoxious.

A great deal has been written,  
And in legal courts been sworn,  
As to whether it was cruel or not  
To amputate the horn ;  
And with veterinarians' testimony  
We have been much impressed,  
That they never mentioned anæsthetics  
When they the court addressed.

Were we the judge in suits at law  
We would every one convict  
Who did the hand of torture,  
And such cruelty inflict  
In performing such an operation,  
So barbarous and pathetic,  
As amputating cattle's horns  
Without an anæsthetic.

And yet we fear, from what we know,  
That many oft forget  
And do things in their practice  
They afterward regret ;  
But as our theme is getting long,  
Just one more thing we'll mention,  
And ask of you a moment more  
To give your kind attention.

If you have not subscribed already,  
You should at once proceed  
To subscribe for veterinary journals  
And their columns carefully read ;  
But which is best for us to take  
We are not here to tell,  
For each one has its purpose,  
And serves that purpose well.

Should we take THE AMERICAN REVIEW  
And it thoroughly peruse,  
We'll find its columns always filled  
With important veterinary news ;

While the *Veterinary Archives*  
Well fulfills its part  
By publishing comparative news  
Pertaining to our art.

And should we wish an English work,  
Fleming's is complete,  
In furnishing desirable news,  
It can with others well compete ;  
While *Pathology and Therapeutics*,  
That McFadyean does edit,  
Is certainly scientific  
And does the author credit.

So in sending our subscriptions  
We can make no mistake  
If we make not one omission  
And do all such journals take ;  
But our duty does not end there—  
To read what others edit—  
Put your shoulder to the wheel,  
Write yourselves ; and give your cases credit.

In conclusion, fellow members,  
It is only just and fair  
To give my thanks for having been  
Elected to this chair ;  
And as the time has come again  
When you make a new selection,  
Gentlemen ; at once proceed  
With our annual election.

Nomination and election of officers ensued, which resulted in the following being declared elected, viz : W. R. Howe V.S., Dayton, President ; E. H. Shepherd, V.S., Cleveland, 1st Vice-President ; J. W. Fair, D.V.S., Berlin, 2d Vice-President ; N. C. McLean, V.S., Jeromesville, 3rd Vice-President ; W. H. Gribble, D.V.S., Washington C. H., Secretary ; J. B. Hillock, V.S., Columbus, Treasurer.

The following names were presented for membership, and being vouched for as graduates, were upon ballot all declared elected : Dr. Neil Jones, Chillicothe, (Ontario), vouched for by Drs. Shaw and Butler ; Dr. F. J. King, Zanesville, (Ontario), vouched for by Drs. Butler and Wight ; Dr. S. Bretz, Little Sandusky, (Chicago), vouched for by Drs. Cotton and Hillock.

Each new member in turn was called upon for an address, which was responded to in a few brief remarks.

A letter from Prof. Liautard, was read, expressing his regards for the Ohio Society and offering to print all papers read before the Association and a full report of the meeting.

A vote of thanks were given Dr. Liautard, and the Secretary instructed to obtain the essays and send them for publication.

The Secretary then read a communication from Dr. Kinsman, Secretary of the Board of Live Stock Commissioners, in response to the resolution of censure offered by Dr. Butler and passed at our last semi-annual meeting.

The communication showed that the Live Stock Commission do not or did not have so much authority in contagious diseases as had been presumed, stating that after they quarantine, if the laws are violated, it then becomes the duty of citizens living in the locality to file information with the Prosecuting Attorney and not the duty of the Ohio Live Stock Commission. As to the cases of glanders which the resolution referred to especially called attention to; he states that orders were sent to the Sheriff of the county and if these orders were not obeyed, the information was not in the hands of the Commission (if at all only by hearsay) and those whose well being in person or property was threatened should have entered complaint, and that the law nowhere makes it the duty of the Commission to prosecute those who violate such quarantine laws.

The communication up to this point was well received and many began to think this Association too hasty at our last semi-annual meeting, but the final paragraphs of the letter were a slur upon the ability of Ohio veterinarians, in fact upon veterinarians at large.

For instance he states "The Ohio Live Stock Commission have to say that their experiences with the veterinarians of Ohio have not always been such as to inspire confidence, for until they could find two or more veterinarians to agree touching the diagnosis of glanders they must go slowly. . . for they have not only escaped prosecution themselves, but have protected the veterinarians from this misfortune, and that a veterinarian in the employ of this Commission has been urged that the place is no sinecure and from what we know of the veterinarians' capacity to keep within the bounds of the law, we are free to state that the experiment would be a hazardous one."

A heated discussion followed the reading, in which Drs. Fair, Cotton, Hillock, Gribble and Butler took part.

Dr. Cotton thought the words beneath the dignity of a gentleman, but from his experience with the Commission, we could expect nothing else.

Dr. Gribble said the Commission had been very prompt in aiding him in an outbreak of glanders.

Dr. Hillock thought we were too hasty.

Dr. Fair urged hearty cooperation between the veterinary profession of Ohio and the State Live Stock Commission. Could not say that the Board had treated him with justice, but he desired unity of action.

Dr. Butler described the method of procedure with the Yates horses in Pickaway County.

On the whole it was thought that the remarks referring to disagreement and proficiency of veterinary surgeons was entirely uncalled for and out of place; it was cack calling kettle sooty, for the profession of which Dr. Kinsman is an honored member can certainly not boast of being much better. Especially is this shown in suits at law for malpractice, where one physician sued for damages is convicted on the evidence and expert testimony of several other physicians. Years after, when the subject dies, at post-mortem the convicted physician proves to be the only one who truly diagnosed aright.

The discussion becoming too warm, Dr. Gribble moved and Dr. Wight seconded; That the discussion cease and there be no further discussion unless Dr. Kinsman be present.

Dr. Meyers, Sr., then read a paper on "Tracheotomy and Laryngeal Injections in Affections of the Throat."

He exhibited a tracheotomy tube to be used in cases where it was thought the instrument would be needed but a few days. It is in the form of a trocar and canula with openings at the centre of canula, and to use it, it is passed transversely through the trachea and held in place by set screws.

Dr. Meyers' papers are always full of interest, and this one was no exception to the rule.

Dr. J. S. Butler asked if such injections would be not beneficial in chronic coughs.

Ans. Should judge so, if sufficient quantity of solution be used to well wash mucous membrane.

Dr. Newton described a case of tracheal abscess following the use of a tracheotomy tube: fatal.

Dr. Meyers thought death might have resulted from false membranes, etc., as ulcers were also present. Others thought the case one of irregular strangles.

Dr. Charlesworth reported case where constriction or rather flattening of trachea followed use of tube. Operated twice to relieve and at last was cured by use of a long round silver tube being kept in the trachea until that organ adapted itself to the shape of the tube.

Dr. Butler, who had aided in the case, thought the rings of trachea lacked strength.

Dr. J. D. Fair thought less trouble would result if none of the rings of the trachea were completely cut through, but instead about half of two different rings were removed.

Dr. J. S. Butler read from the London journal a report of a case where the epiglottis become misplaced and held by the velum pendulum palati.

Dr. Shepherd read an essay on the uses of Hyposulphite of Soda, which showed the writer had been quite watchful of its action. It elicited considerable discussion, especially as regarded its use in skin diseases and gastric fermentation.

Dr. Torrence gave his experience in treating skin troubles with chloronaphtholum, claiming it be almost a sure cure, besides being a deodorizer and disinfectant.

The discussion soon ran into the treatment of azoturia, which was generally indulged in and which elicited the fact that this disease was more prevalent and fatal in some localities than in others. Some members expected when the animal was prostrated it was as good as dead, while others paid no particular attention to this fact.

Dr. Derr had a case to which he had called Dr. Wight and others, where paralysis had followed the disease and where the animal was prostrate nine months and then recovered, working to-day all covered with scars from bed sores.



Dr. Gribble had had paralysis follow in several cases, but had never had the luck to find an owner with a nine months patience, for after a few weeks treatment they had invariably killed them.

Moved by Dr. Cotton, seconded by Dr. Newton that we adjourn. Carried.

EVENING SESSION.

Meeting called to order at 7:30 P.M. with Vice-President Shepherd in the chair.

An essay by Dr. Cotton, on "Remedies for Parturient Apoplexy" was read.

His pet prescription is the following:

Spts. ammon. aroma., 1 part; spts. aetheris nit., 2 parts. Dose—three ounces every half hour for five hours; then three ounces every hour for five hours.

Also give 24 ounces of magnesia sulph. Large doses of stimulants were in his opinion curative, to be followed with nux vomica if necessary; also rectal injections of hot water.

Drs. Shaw, Butler, Torrence, Derr, Newton and Prof. Townsend lauded olei tiglii even when degulation was paralyzed.

Committee on contagious diseases rendered report.

Dr. J. D. Fair undertook to explain the hair splitting difference between contagious and infections; he differed from Dungleson and Gross.

Dr. Hillock was of opinion that actinomykosis was contagious, citing several reports in proof of same, one being five cases on one farm from trying to cure one.

Drs. Shepherd, Torrence and W. C. Fair reported and gave descriptions of an extensive outbreak of stomatitis in Cleveland.

Dr. J. D. Fair believed in a volatile virus in glanders.

Dr. Gribble could not believe in such a virus; had had some experience with the disease and was well satisfied it resulted from actual inoculation; had never seen a case wherein there was proof of spontaneous origin. If he believed as Dr. Fair, \$4.00 a day when actually in the employ of the great State of Ohio would be no inducement to stand before a case of glanders, for he might be making an examination just at the time this volatile virus was expelled.

Dr. Fair presumed Dr. Gribble would not be a week making the examination.

The theory was not championed by any other member.

Dr. Howe reported several cases of death occurring on one farm that puzzled him. Temperature and pulse were about normal and from examination of these would not think anything wrong, but their facial expression showed otherwise. There was some paralysis and groom stated inability to swallow. Lived but a day or a few hours after being first taken. Youngest seemed to die in shortest time.

Post-mortem (Gross) revealed nothing to satisfy him as to cause of death.

Dr. Hillock suggested diphtheria.

Dr. Fair thought corn stalk disease, as the description tallied with letters received from western farmers.

Dr. Butler thought it not proven that horses have diphtheria.

Dr. Hillock said diphtheria was epidemic among the dogs and cats of Columbus at the present time.

A motion to appoint Committee on Veterinary Legislation brought out so many opinions that it was decided to let the matter alone, as it was useless to waste time in asking help.

Dr. Gribble offered resolution to amend the constitution, that hereafter officers do not take their respective offices until the close of the meeting at which they were elected.

Here Dr. J. S. Butler rose to his feet and in a few most appropriate remarks stated the fact of his having sold his practice, etc., at Piqua on account of his health, and as he was about to locate somewhere in the west, he thought it useless to continue on the membership roll of the Association.

Dr. Newton expressed his sorrow at the loss of Dr. Butler, as he had been associated with the Association ever since it started, in fact had assisted at its birth, and in view of the good which Dr. Butler had been to the Association he moved he be elected an honorary member. This was quickly seconded and carried unanimously.

Dr. Butler thanked the Association and would always try to meet with them wherever possible.

Under discussion for place of next semi-annual meeting it was moved by Dr. Torrence, seconded by Dr. Hillock, that the President, Secretary and Dr. Newton correspond with the officers of the Michigan State Society, and try to agree upon a union-meeting at some time and place during the summer. Carried.

Bills were presented and allowed.

Treasurer reported about \$300 in hand.

Association adjourned to meet on the order of the President and call of the Secretary, if possible in accordance with above resolution.

W. H. GRIBBLE, D.V.S.,

*Secretary.*

## OBITUARY.

### ORMSBY SMEDLEY.

*Whereas*, The Almighty in his divine providence has seen fit to take from our midst our friend and colleague Ormsby Smedley, of Media, Pa., be it

*Resolved*, That by his death, we, the students of the American Veterinary College, deeply feel the loss of him, who had, by his genial and studious disposition, endeared himself to all of us as a friend, class-mate and associate. Also be it

*Resolved*, That we send a copy of these resolutions to the family of the deceased and to the AMERICAN VETERINARY REVIEW for publication.

E. N. STOUT,  
J. E. DELANEY,  
H. D. FENIMORE. } *Committee.*

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